AMENDMENTS TO THE CLAIMS WITH MARKINGS TO SHOW CHANGES MADE, AND LISTING OF ALL CLAIMS WITH PROPER IDENTIFIERS

1.-5. (Canceled)

6. (Currently amended) A permanent-magnet excited synchronous motor, comprising:

a stator having a plurality of tooth coils; and

a rotor with a plurality of poles interacting with the stator and constructed to dampen both the fifth harmonic and seventh harmonic of the rotor field,

wherein at least one of the rotor and stator has a skew of 3/5 of a slot pitch with respect to the synchronous motor, and

wherein the rotor has a pole coverage of between 85% and 90% of the slot pitch.

7. (Currently amended) A permanent-magnet excited synchronous motor, comprising:

a stator having with a plurality of tooth coils, and

a rotor with a plurality of poles interacting with the stator and constructed to dampen both the fifth harmonic and seventh harmonic of the rotor field,

wherein at least one of the rotor and stator has a skew of 3/7 of a slot pitch with respect to the synchronous motor, and

wherein the rotor has a pole coverage of 80% (±10%) of the slot pitch.

8. (Currently amended) A permanent-magnet excited synchronous motor, comprising:

a stator having with a plurality of tooth coils, and

a rotor disposed for rotation in the stator and having a pole coverage of between 85% and 90% of the slot pitch,

wherein a total skew between the rotor and the stator of 3/5 of a slot pitch is apportioned to the stator and the rotor for damping the fifth harmonic and the seventh harmonic of the rotor field.

9. (Currently amended) A permanent-magnet excited synchronous motor, comprising:

a stator having with a plurality of tooth coils, and

a rotor disposed for rotation in the stator and having a pole coverage of 80% (±10%) of the slot pitch,

wherein a total skew between the rotor and the stator of 3/7 of a slot pitch is apportioned to the stator and the rotor for damping the fifth harmonic and the seventh harmonic of the rotor field.

10. (Previously presented) The permanent-magnet excited synchronous motor of claim 6, wherein the rotor comprises a plurality of permanent magnets and the permanent magnets are arranged or magnetized in an axial direction of the rotor so as to provide a desired rotor skew.

11. (Previously presented) The permanent-magnet excited synchronous motor of claim 10, wherein the permanent magnets are selected from the group consisting of thin plate magnets, ring-shaped magnets and cup-shaped magnets.

12. (Previously presented) The permanent-magnet excited synchronous motor of claim 7, wherein the rotor comprises a plurality of permanent magnets and the permanent magnets are arranged or magnetized in an axial direction of the rotor so as to provide a desired rotor skew.

13. (Previously presented) The permanent-magnet excited synchronous motor of claim 12, wherein the permanent magnets are selected from the group

consisting of thin plate magnets, ring-shaped magnets and cup-shaped magnets.

14. (Previously presented) The permanent-magnet excited synchronous motor of claim 8, wherein the rotor comprises a plurality of permanent magnets and the permanent magnets are arranged or magnetized in an axial direction of the rotor so as to provide a desired portion of the total skew.

15. (Previously presented) The permanent-magnet excited synchronous motor of claim 14, wherein the permanent magnets are selected from the group consisting of thin plate magnets, ring-shaped magnets and cup-shaped magnets.

16. (Previously presented) The permanent-magnet excited synchronous motor of claim 9, wherein the rotor comprises a plurality of permanent magnets and the permanent magnets are arranged or magnetized in an axial direction of the rotor so as to provide a desired portion of the total skew.

17. (Previously presented) The permanent-magnet excited synchronous motor of claim 16, wherein the permanent magnets are selected from the group consisting of thin plate magnets, ring-shaped magnets and cup-shaped magnets.